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In abstracts of patents only the names of firms have been given and the abstracts have been indexed under these names. Where two firms have jointly taken out a patent, or where a paper has two or more authors, all the names have been included in the index. Names beginning with de, la, le, van, von, etc., are indexed under the surname.

### Abbreviations of Names of Firms, etc.

AAP ...	...	Koppers Co. Inc.	HH ...	...	Hardman & Holden Ltd
AATCC ...	...	American Association of Textile Chemists and Colorists	HSH ...	...	Harshaw Chemical Co.
Acna ...	...	Aziende Colori Nazionali Affini	HWL...	...	Hickson & Welch Ltd
ACY ...	...	American Cyanamid Co.	IC ...	...	Interchemical Corpn
BA ...	...	Bates Chemical Co. Inc.	ICI ...	...	Imperial Chemical Industries Ltd
BASF ...	...	Badische Anilin- & Soda-Fabrik A.G.	KVK ...	...	Kemisk Varek Koge A/S
CFM ...	...	Cassella Farbwerke Mainkur A.G.	KYK...	...	Nippon Kayaku Co.
CIBA ...	...	CIBA Ltd	LT ...	...	Laporte Titanium Ltd
Col ...	...	Columbian Carbon Co.	MCI ...	...	Mitsubishi Chemical Industries Ltd
CSIRO ...	...	Commonwealth Scientific and Industrial Research Organisation	MDW ...	...	Mitsui Chemical Industry Co. Ltd
DH ...	...	Durand & Huguenin S.A.	MMM ...	...	Minnesota Mining & Manufacturing Corpn
DuP ...	...	E.I. du Pont de Nemours & Co. Inc.	Montecatini ...	...	Montecatini Società Generale per l'Industria Mineraria e Chimica
FBy ...	...	Farbenfabriken Bayer A.G.	NL ...	...	National Lead Co.
FC ...	...	Ferro Corpn	NSK ...	...	Sumitomo Chemical Co. Ltd
FH ...	...	Farbwerke Hoechst A.G.	OBM...	...	Otto B May Inc.
Fran ...	...	Française des Matières Colorantes S.A.	Rhône Poulenc	...	Société des Usines Chimiques Rhône-Poulenc
FW ...	...	VEB Farbenfabrik Wolfen	S ...	...	Sandoz A.G.
G ...	...	General Aniline & Film Corpn		...	Sandoz Products Ltd
GS ...	...	G. Siegle & Co. G.m.b.H.	Vond ...	...	N.V. Fabriek van Chemische Producten, Vondelingenplaat
Gy ...	...	Geigy, J. R., A.G.	YDC ...	...	Yorkshire Dveware & Chemical Co. Ltd
	...	The Geigy Co. Ltd			

### Symbols used in Index

The following symbols have been added, where appropriate, after the names of authors.

C	...	...	Communication	N	...	...	Note
CMC	...	...	Publication sponsored by the Colour Measurement Committee	O	...	...	Obituary Notice
				P	...	...	Proceedings
Corr	...	...	Correspondence	PC	...	...	Pattern Cards
EA	...	...	External Address	R	...	...	Book Review
				RP	...	...	Review Paper

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# Index to Subjects

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The method of compiling the Index is essentially the same as that described in the introduction to the subject index of Vol. 79 (p. xxxix). In addition, lectures and communications published in the *Journal* have been more thoroughly indexed, so that entries in the index may refer to one section of a paper rather than to the complete paper. Where the index entry refers to a pattern card, the maker's initials are given in parentheses. Other symbols in parentheses refer to papers published in the *Journal* (see list on page 5).

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		561	94							658	341						147	381	
3,282,577	35			399	131	3,304,180	222	607	216	659	383		332	609	331				
						195	175			659	383		331	617	381	498	379		
3,282,577	35	603	91	441	119	197	171	3,311,445	283	664	260		332	618	381				
		604	91	443	119	198	178						332	669	384	3,335,004	394		
639	46	606	91	462	134			476	519	714	273		332	670	393	008	394		
640	52	635	94	470	117			484	215	718	271		332	672	381	010	525		
649	55	668	93	471	131	263	165	485	271	721	289		332	672	381	011	525		
692	50			472	133	283	179	486	216	722	284		332	673	515	020	288		
693	90					286	172	490	214	728	275		332			091	392		
699	49	701	82			289	173	492	208	730	271		332						
		788	121	591	117	290	173	496	283	763	262	131	337						
709	50			570	117														
717	38	883	95	578	117			497	223					448	173	105	382		
719	44			585	136	346	212	499	287	865	267			451	379				
721	52	3,292,228	95			862	206					568	330						
		270	75	609	132			521	220	3,320,021	269					617	384	465	397
853	38	273	75	615	132			527	286							638	452		
879	45			616	126	3,305,297	218	532	287			718	329			656	393	548	378
886	46			617	126			580	215							662	393	583	379
887	46	418	136	617	126			582	208							673	390		
888	46			653	127	315	284			3,325,249	388					678	388	3,336,141	387
889	46	532	75	653	127	378	216				388					679	388	145	389
890	54	577	95	691	124	390	516				388					680	382	148	388
891	54					391	284	606	210		285					681	390	149	381
								618	213		287					684	390		
		992	94			507	221			113	285					687	398	155	388
908	46	994	83	847	124	539	212			116	289					688	449	156	389
913	79			848	125			3,312,522	221		262	301	338			689	381	157	382
932	43	3,293,003	116	853	133			599	292		275		337	303	339	691	449	158	396
		037	95	862	133	604	223			199	273								
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		059	90	987	132			682	210							791	390	285	384
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		062	133			744	220	758	216					417	337			287	384
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690	51	071	93	013	118	762	214	3,313,002	330					441	340	848	386	846	392
691	94	073	93	030	127	763	219			479	329			442	398	884	382	864	379
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743	50			041	119			591	336					446	398			3,337,289	392
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746	91	176	381			850	208	593	346									299	388
747	40	178	94			867	220	597	346										
				112	117	890	210			776	261			511	386				
849	37					891	336	796	346							313	380		
858	38	238	80	3,300,272	173			797	335							351	380	301	391
886	37	339	89	274	165					925	261			811	329			352	390
		340	88	299	213	955	216	866	348	3,321,197	261			876	347			356	382
906	80															658	389	359	388
		675	88													660	389	361	389
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				314	219											689	385		
3,287,082	45			326	171	815	224									690	394		
		912	136	329	170			743	285							693	390	524	384
				332	170	906	214	744	283							696	381	525	521
126	38			334	222	911	214	795	287							698	381	527	521
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142	44			339	213	952	218	812	274										
154	50					960	213	813	288										
		532	89																
206	52	534	90	404	164			917	288										
207	53	535	91	406	164	3,308,021	217												
210	38	539	119	407	164	062	207	3,315,014	277										
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308	45			428	172														
312	54	613	95	450	173	102	207	328	284										
314	39	632	93	111	208			499	260										
348	81	686	82																
358	42	689	76	206	216	206	216	3,316,055	277										
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								093	343										
788	93					786	206	094	343										
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552	79	736	85	3,309,165	283	166	217												
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629	90			691	171	218	287	189	346										
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696	83					224	287												
		916	129			225	287												
		973	119			228	287												
						254	218												
709	77																		
745	84	3,296,016	132																
778	82	019	117																



LIST OF UNITED STATES PATENTS ABSTRACTED—continued

No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page	No. of Patent	Page
3,340,226	428	3,343,980	448	3,347,963	495	3,353,900	477	3,359,205	477	3,364,100	541	3,368,990	530	3,373,055	540	3,377,191	541
228	440	983	448			902	477	207	477	107	516	991	530			192	541
245	498			3,348,526	477	903	491	208	477	140	516	997	518	126	514	193	529
250	436	3,344,043	444			904	477	226	498	141	516			131	530	198	516
		044	444			915	475	234	490	169	517	3,369,023	526			199	515
340	428	051	425			972	488	235	490	171	515			205	527		
						973	487	236	498	172	517			237	542	235	533
617	448					974	488	253	481	173	518					262	543
						979	487			174	515			471	539	271	514
764	452					980	486	352	489	192	515					272	514
796	426					993	515			195	521					274	513
		3,345,161	444					763	476					3,374,100	517	275	516
802	444	195	448					944	477	211	525			105	527	291	529
803	444	199	438											106	513	292	529
806	444													107	539	299	530
														143	262		
3,341,277	434							3,360,337	488	3,365,264	521			169	515		
278	434									265	541			193	529	314	532
										266	542			196	531		
327	445									296	515						
330	445									321	543	3,370,024	531				
331	434									323	527			550	513	412	532
343	428									329	539					415	532
345	434																
346	437																
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3,342,424	486																
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622	488																
630	428																
704	444																
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743	437																
764	438																
799	480																
800	431																
801	431																
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921	436																
3,343,274	425																
815	488																
905	443																
906	441																
974	437																
975	499																

# List of Periodicals Abstracted

With Abbreviated Titles used

JANUARY—DECEMBER 1969

ABBREVIATED TITLE	JOURNAL	ADDRESS OF PUBLISHER
<i>Amer. Dyestuff Rep.</i> ... ..	American Dyestuff Reporter ... ..	44 E. 23rd Street, New York, 10010 N.Y., U.S.A.
<i>Anal. Chem.</i> ... ..	Analytical Chemistry ... ..	American Chemical Society, 20th and Northampton Streets, Easton, Pa., U.S.A.
<i>Angew. Chem. Annalen</i> ... ..	Angewandte Chemie... ..	Verlag Chemie G.m.b.H., Pappelallee 3, Weinheim/Bergstrasse, Germany.
<i>Australian J. Biol. Sci.</i> ... ..	Australian Journal of Biological Sciences... ..	
<i>Biochem. J.</i> ... ..	Biochemical Journal... ..	Commonwealth Scientific and Industrial Research Organisation, 314 Albert Street, East Melbourne C2, Victoria, Australia.
<i>Bull. Chem. Soc. Japan</i> ... ..	Bulletin of the Chemical Society of Japan ... ..	Cambridge University Press, Bentley House, 200 Euston Road, London N.W.1.
<i>Bull. Inst. Text. France</i> ... ..	Bulletin de l'Institut Textile de France ... ..	5, 1-Chome, Kanda-Surugadai, Chiyoda-ku, Tokyo, Japan.
<i>Bull. Text. Res. Inst. Japan</i> ... ..	Bulletin of the Textile Research Institute ... ..	59 Rue de la Faisanderie, Paris (16 <sup>e</sup> ), France.
<i>Bumazh. prom.</i> ... ..	Bumazhnaya Promyshlennost' ... ..	4 Sawatari, Kanagawa, Yokohama, Japan.
<i>Canadian Textile J.</i> ... ..	Canadian Textile Journal ... ..	State Committee for Forest, Cellulose, Paper and Wood Processing Industries, Moscow K-12, ul. 25 Oktyabrya 8, U.S.S.R.
<i>Chem. Abs.</i> ... ..	Chemical Abstracts ... ..	Canadian Textile Journal Publishing Co. Ltd, 4795 St Catherine Street West, Westmount, Montreal 6, Quebec, Canada.
<i>Chem. Commun.</i> ... ..	Chemical Communications ... ..	American Chemical Society, 1155 16th Street, N.W., Washington D.C. 20036, U.S.A.
<i>Chem. Ber.</i> ... ..	Chemische Berichte ... ..	The Chemical Society, Burlington House, Piccadilly, London W.1.
<i>Chem. and Ind.</i> ... ..	Chemistry and Industry ... ..	Verlag Chemie G.m.b.H., Pappelallee 3, Weinheim/Bergstrasse, Germany.
<i>Chem. in Britain</i> ... ..	Chemistry in Britain... ..	The Society of Chemical Industry, 14 Belgrave Square, London S.W.1. The Chemical Society, Burlington House, Piccadilly, London W.1. The Royal Institute of Chemistry, 30 Russell Square, London W.C.1.
<i>Chemiefasern</i> ... ..	Chemiefasern ... ..	
<i>Collect. Czech. Chem. Commun.</i> ... ..	Collection of Czechoslovak Chemical Communications... ..	Deutscher Fachverlag m.b.H., Frankfurt/Main, Schumannstrasse 27, Germany.
<i>Color Engng.</i> ... ..	Color Engineering ... ..	Czechoslovak Academy of Sciences, Institute of Organic Chemistry and Biochemistry, Na cvičišti 2, Prague 6.
<i>Deutsche Farben-Zeitschrift</i> ... ..	Deutsche Farben-Zeitschrift ... ..	Kinelow Publishing Co. Inc., 2 John Street, New York 38, N.Y., U.S.A.
<i>Die Farbe</i> ... ..	Die Farbe ... ..	Wissenschaftliche Verlag G.m.b.H., Stuttgart N, Birkenwaldstrasse 44, Germany.
<i>Doklady Akad. Nauk S.S.S.R.</i> ... ..	Doklady Akademii Nauk S.S.S.R.... ..	Musterschmidt-Verlag, 34 Göttingen, Turmstrasse 7, Postfach 421, Germany.
<i>Dyer</i> ... ..	The International Dyer, Textile Printer, Bleacher and Finisher ... ..	Academy of Sciences of the U.S.S.R., Moscow, K-62, Podsolesskii pereulok 21, U.S.S.R.
<i>Endeavour</i> ... ..	Endeavour ... ..	Textile Business Press Ltd, 30 Finsbury Square, London E.C.2.
<i>Faserforsch. und Textiltech.</i> ... ..	Faserforschung und Textiltechnik ... ..	Imperial Chemical Industries Ltd, Millbank, London S.W.1.
<i>Galaxia</i> ... ..	Galaxia ... ..	Akademie-Verlag G.m.b.H., 108 Berlin, W.8 Leipziger Strasse 3-4, Germany.
<i>Helv. chim. Acta</i> ... ..	Helvetica chimica Acta ... ..	Asociación Química Textil Argentina, Bulnes 1425, Buenos Aires, Argentina.
<i>Hungarian Tech. Abstracts</i> ... ..	Hungarian Technical Abstracts ... ..	Verlag Helvetica Chimica Acta, 4000 Basle 7, Switzerland.
<i>Ind. Eng. Chem.</i> ... ..	Industrial and Engineering Chemistry ... ..	Hungarian Technical Abstracts, P.O. Box 12, Budapest 8, Hungary.
<i>Indian Textile J.</i> ... ..	Indian Textile Journal ... ..	American Chemical Society, 1155 16th Street, N.W., Washington D.C., 20036, U.S.A.
<i>Izvestiya Akad. Nauk S.S.S.R., ser. khim.</i> ... ..	Izvestiya Akademii Nauk S.S.S.R.... ..	The Indian Textile Journal Pte. Ltd, "Surya Mahal", Military Square, Fort, Bombay 1, India.
<i>J. Amer. Chem. Soc.</i> ... ..	Journal of the American Chemical Society ... ..	Academy of Sciences of the U.S.S.R., Moscow, Leninskii prospekt 47, U.S.S.R.
<i>J. Amer. Leather Chem. Assoc.</i> ... ..	Journal of the American Leather Chemists' Association ... ..	1155 16th Street, N.W., Washington D.C., 20036, U.S.A.
<i>J. Appl. Chem.</i> ... ..	Journal of Applied Chemistry ... ..	228 North Green Street, Easton, Pennsylvania, U.S.A.
<i>J. Applied Polymer Sci.</i> ... ..	Journal of Applied Polymer Science ... ..	Society of Chemical Industry, 14 Belgrave Square, London S.W.1.
<i>J. Biol. Chem.</i> ... ..	Journal of Biological Chemistry ... ..	Interscience Publishers Ltd, 88-90 Chancery Lane, London W.C.2.
<i>J.C.S., C Organic</i> ... ..	Journal of the Chemical Society (C Organic) ... ..	Mount Royal and Guildford Avenues, Baltimore 2, Maryland, U.S.A.
<i>J. Chem. Phys.</i> ... ..	Journal of Chemical Physics ... ..	Burlington House, London W.1.
<i>J. Chromatography</i> ... ..	Journal of Chromatography ... ..	American Institute of Physics, Lancaster, Pennsylvania, U.S.A.
<i>J. Indian Chem. Soc.</i> ... ..	Journal of the Indian Chemical Society ... ..	Elsevier Publishing Co., 110-112 Spuistraat, Amsterdam, Holland.
<i>J. Oil Col. Chem. Assoc.</i> ... ..	Journal of the Oil and Colour Chemists' Association ... ..	92 Acharya Prafulla Chandra Road, Calcutta 9, India.
<i>J. Opt. Soc. Amer.</i> ... ..	Journal of the Optical Society of America ... ..	Wax Chandlers' Hall, Gresham Street, London E.C.2.
<i>J. Org. Chem.</i> ... ..	Journal of Organic Chemistry ... ..	American Institute of Physics, Prince and Lemon Streets, Lancaster, Pennsylvania, U.S.A.
<i>J. Paint Tech.</i> ... ..	Journal of Paint Technology (Formerly Official Digest, Journal of Paint Technology and Engineering) ... ..	American Chemical Society, 20th and Northampton Streets, Easton, Pa., U.S.A.
<i>J. Physical Chem.</i> ... ..	Journal of Physical Chemistry ... ..	121 South Broad Street, Philadelphia 7, Pa. 19107 U.S.A.
<i>J. Polymer Sci.</i> ... ..	Journal of Polymer Science... ..	American Chemical Society, 20th and Northampton Streets, Easton Pa., U.S.A.
<i>J. Res. Nat. Bur. Stand.</i> ... ..	Journal of Research of the National Bureau of Standards ... ..	Interscience Publishers Inc., 250 Fifth Avenue, New York 1, N.Y., U.S.A.
<i>J. Soc. Fiber Sci. Technol. Japan</i> ... ..	Journal of the Society of Fiber Science and Technology, Japan (Sen-i Gakkaishi) ... ..	Superintendent of Documents, U.S. Government Printing Office, Washington D.C., 20402, U.S.A.
<i>J. Soc. Leather Trades Chem.</i> ... ..	Journal of the Society of Leather Trades' Chemists ... ..	Sen-i Gakkai, c/o Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo, Japan.
<i>J. Textile Inst.</i> ... ..	Journal of the Textile Institute ... ..	52 Crouch Hall Lane, Redbourn, Herts.
		10 Blackfriars Street, Manchester 3.

List of Periodicals Abstracted — *continued*

ABBREVIATED TITLE	JOURNAL	ADDRESS OF PUBLISHER
<i>Khim. Volok.</i> ... ..	<i>Khimicheskie Volokna</i> ... ..	State Committee of Chemical and Oil Industry, Moscow, Krivokolennyi pereulok d.12, U.S.S.R.
<i>Kolloid. zhur.</i> ... ..	<i>Kolloidnyi zhurnal</i> (Colloid Journal of the U.S.S.R.) ...	Academy of Sciences of the U.S.S.R., Moscow, Shubinskiipereulok 10, U.S.S.R.
<i>Kolor. Ertesito</i> ... ..	<i>Kolorisztikai Értesítő</i> ... ..	Központi Kolorisztikai Kutató Laboratórium, Budapest 62, Postafiók 182
<i>Makromol. Chem.</i> ... ..	<i>Die Makromolekulare Chemie</i> ... ..	Dr Alfred Hüthig Verlag, G.m.b.H., Wilkenstr. 3, Heidelberg, Germany.
<i>Melliand Textilber.</i> ... ..	<i>Melliand Textilberichte</i> ... ..	Verlag Melliand Textilberichte KG, 69 Heidelberg, Rohrbacher Str. 76, Germany.
<i>Mh. Chem.</i> ... ..	<i>Monatshefte für Chemie und verwandte Teile anderer Wissenschaften</i> ... ..	Springer-Verlag, Wien I, Mölkerbastei 5, Austria.
<i>Nature</i> ... ..	<i>Nature</i> ... ..	Macmillan & Co. Ltd, St. Martin's Street, London W.C.2.
<i>Paint, Oil &amp; Col. J.</i> ... ..	<i>Paint, Oil and Colour Journal</i> ... ..	Morris Ashby Ltd, 10 Philpot Lane, London E.C.3.
<i>Paint Tech.</i> ... ..	<i>Paint Technology</i> ... ..	Sawell Publications Ltd, 4 Ludgate Circus, London E.C.4.
<i>Pakistan J. Scientific and Industrial Res.</i> ...	<i>Pakistan Journal of Scientific and Industrial Research</i> ...	39 Garden Road, Karachi 3, Pakistan.
<i>Plastics and Polymers</i> ... ..	<i>Transactions and Journal, The Plastics Institute</i> ... ..	11 Hobart Place, London S.W.1.
<i>Polymer Engng Sci. (formerly SPE Trans.)</i> ...	<i>Polymer Engineering and Science</i> ... ..	Society of Plastics Engineers Inc., 65 Prospect Street, Stamford, Connecticut 06902, U.S.A.
<i>Polish Tech. Abs.</i> ... ..	<i>Polish Technical Abstracts</i> ... ..	Warsaw, Aleje Niepodległości 188, Poland.
<i>Proc. Chem. Soc.</i> ... ..	<i>Proceedings of the Chemical Society</i> ... ..	Burlington House, London W.1.
<i>Proc. I.R.I.</i> ... ..	<i>Transactions and Proceedings Institution of the Rub' er Industry</i> ... ..	4 Kensington Palace Gardens, London W.8.
<i>Proc. Roy. Soc.</i> ... ..	<i>Proceedings of the Royal Society</i> ... ..	Burlington House, London W.1.
<i>Rec. Trav. chim.</i> ... ..	<i>Recueil des Travaux chimiques des Pays-Bas</i> ... ..	Burnierstraat 1, 's-Gravenhage, Holland.
<i>Rept Govt Chem. Ind. Research Inst. Tokyo</i> ...	<i>Reports of the Government Chemical Industrial Research Institute, Tokyo</i> ... ..	1-chome, Hon-machi, Shibuya-ku, Tokyo, Japan.
<i>Rev. Roumaine Chim.</i> ... ..	<i>Revue Roumaine de Chimie</i> ... ..	Academia Republicii Populare Romine, Str. Dumbrova Rosie 23 Bucharest 9, Roumania.
<i>Skinner's Rec.</i> ... ..	<i>Skinner's Record of the Man-made Fibres Industry</i> ...	St. James House, 44 Brazennose Street, Manchester 2.
<i>Stain Tech.</i> ... ..	<i>Stain Technology</i> ... ..	Williams & Wilkins Co., Baltimore 2, Maryland, U.S.A.
<i>Svensk Papperstidning</i> ... ..	<i>Svensk Papperstidning</i> ... ..	Villagatan 1, Stockholm O. Sweden.
<i>Talanta</i> ... ..	<i>Talanta</i> ... ..	Pergamon Press, Headington Hill Hall, Oxford.
<i>Tappi</i> ... ..	<i>Tappi</i> ... ..	Technical Association of Pulp and Paper Industry, 360 Lexington Avenue, New York, N.Y. 10017, U.S.A.
<i>Teintex</i> ... ..	<i>Teintex, incorporating Revue Générale des Matières Colorantes</i> ... ..	60 rue Richelieu, Paris (2e), France.
<i>Teinture et Apprêts</i> ... ..	<i>Teinture et Apprêts</i> ... ..	Société d'Editions Techniques de la Manuention Textile, 12 Rue d'Anjou, Paris (8e), France.
<i>Tekhnol. tekstil. Prom.</i> ... ..	<i>Izvestiya vysshikh uchebnykh zavedenii, Tekhnologiya tekstil'noi promyshlennosti</i> (Technology of the Textile Industry of the U.S.S.R.) ... ..	Ivanova, ulitsa Fridrikha Engel'sa 21, U.S.S.R.
<i>Tekstil. prom.</i> ... ..	<i>Tekstil'naya promyshlennost' (Textile Industry of the U.S.S.R.)</i> ... ..	Gizlegprom, Moscow, Tsentr, ulitsa Kirova 39, 6-i etazh Komnata 620, U.S.S.R.
<i>Tetrahedron</i> ... ..	<i>Tetrahedron</i> ... ..	} Pergamon Press, Headington Hill Hall, Oxford.
<i>Tetrahedron Letters</i> ... ..	<i>Tetrahedron Letters</i> ... ..	
<i>Tex</i> ... ..	<i>De Tex</i> ... ..	Uitg. C. Misset N.V., Doetinchem, Holland.
<i>Textil Praxis</i> ... ..	<i>Textil Praxis</i> ... ..	Konradin-Verlag Robert Kohlhammer G.m.b.H., Stuttgart 1, Postfach 625, Germany.
<i>Text. Chem. Colorist</i> ... ..	<i>Textile Chemist and Colorist</i> ... ..	American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, North Carolina 27709, U.S.A.
<i>Textile Digest</i> ... ..	<i>Textile Digest</i> ... ..	V. D. Limaye, Indian Printing Works, 9 Bakehouse Lane, Fort, Bombay, India.
<i>Text. Inst. &amp; Ind.</i> ... ..	<i>The Textile Institute and Industry</i> ... ..	10 Blackfriars Street, Manchester 3.
<i>Text. Manuf.</i> ... ..	<i>Textile Manufacturer</i> ... ..	31 King Street West, Manchester 3.
<i>Text. Rec.</i> ... ..	<i>Textile Recorder</i> ... ..	Harlequin Press Ltd, Old Colony House, South King Street, Manchester 2.
<i>Text. Research J.</i> ... ..	<i>Textile Research Journal</i> ... ..	Prince and Lemon Streets, Lancaster, Pennsylvania, U.S.A.
<i>Textilveredlung</i> ... ..	<i>Textilveredlung</i> ... ..	Der Verlag, Postfach 207, CH-4001 Basle, Switzerland
<i>Textile J. of Australia</i> ... ..	<i>Textile Journal of Australia</i> ... ..	142 Clarence Street, Sydney, N.S.W., Australia.
<i>Tinctoria</i> ... ..	<i>Tinctoria</i> ... ..	Via Negroli 51, Milan, Italy.
<i>Trans. Faraday Soc.</i> ... ..	<i>Transactions of the Faraday Society</i> ... ..	Aberdeen University Press Ltd, 6 Upper Kirkgate, Aberdeen, Scotland.
<i>Trans. I.R.I.</i> ... ..	<i>Transactions and Proceedings Institution of the Rubber Industry</i> ... ..	4 Kensington Palace Gardens, London W.8.
<i>Trans. Inst. Metal Fin.</i> ... ..	<i>Transactions of the Institute of Metal Finishing</i> ... ..	178 Goswell Road, London E.C.1.
<i>Ukrain. khim. zhur.</i> ... ..	<i>Ukrainskii khimicheskii zhurnal</i> (Ukrainian Chemical Journal) ... ..	Kiev, 30 ulitsa Leontovicha 9a, U.S.S.R.
<i>Vysokomol. Soed.</i> ... ..	<i>Vysokomolekularnye Soedineniya</i> ... ..	Academy of Sciences of the U.S.S.R., Moscow, Kuznetskii Most, d.9/10, U.S.S.R.
<i>Wool Sci. Rev.</i> ... ..	<i>Wool Science Review</i> ... ..	International Wool Secretariat, Dorland House, 18/20 Regent Street London S.W.1.
<i>World Text. Abs.</i> ... ..	<i>World Textile Abstracts</i> ... ..	The Shirley Institute, Manchester M20 8RX
<i>Zesz. Nauk. Politech. Łódz</i> ... ..	<i>Zeszyty Naukowe Politechniki Łódzkiej</i> ... ..	Łódź, Gdanska 155, Poland.
<i>Zhur. obshch. khim.</i> ... ..	<i>Zhurnal obshchei khimii</i> (Journal of General Chemistry of the U.S.S.R.) ... ..	Academy of Sciences of the U.S.S.R., Leningrad B-164, Mendeleevskaya liniya, U.S.S.R.
<i>Zhur. priklad. khim.</i> ... ..	<i>Zhurnal prikladnoy khimii</i> (Journal of Applied Chemistry of the U.S.S.R.) ... ..	Academy of Sciences of the U.S.S.R., Leningrad B-164 Mendelevskaya liniya, U.S.S.R.



# ABBREVIATIONS AND SYMBOLS

## used in *The Journal of the Society of Dyers and Colourists*

No distinction is made in abbreviations between singular and plural

In special cases abbreviations and symbols other than those in the list may be used, but as far as possible they will be as given either in standard English dictionaries or in *British Standard 1991: Part 1:1967*

absolute... ..	abs.	equivalent ... ..	equiv.	<i>para-</i> ... ..	<i>p-</i> ... ..
acetyl ... ..	Ac	ethyl ... ..	Et	parts per million ... ..	p.p.m.
alkyl radical (in chemical formula) ... ..	Alk	Fahrenheit ... ..	F	Patent ... ..	P
alternating current ... ..	a.c.	foot ... ..	ft	phenyl ... ..	Ph
ampère ... ..	A	freezing point ... ..	f.p.	poise ... ..	P
Angström unit ... ..	Å			potential difference ... ..	p.d.
anhydrous ... ..	anhyd.			pound ... ..	lb
aqueous, -ly ... ..	approx., ca	gallon (Imperial) ... ..	gal	precipitate ... ..	ppt.
aqueous... ..	aq.	gallon (U.S.A.)... ..	gal (U.S.A.)	precipitated ... ..	pptd
aryl radical (in chemical formula) ... ..	Ar	gram ... ..	g	precipitation ... ..	pptn
asymmetric (applied to organic compounds) ... ..	as-	gram-molecule ... ..	mole	proportional to... ..	∝
atmosphere (pressure unit) ... ..	atm.	greater than ... ..	>	propyl (normal) ... ..	Pr <sup>n</sup>
atomic ... ..	at.	halogen (in chemical formula)... ..	Hal	propyl (iso) ... ..	Pri
atomic weight ... ..	at. wt	horse power ... ..	h.p.	qualitative(ly) ... ..	qual.
		hour ... ..	h	quantitative(ly)... ..	quant.
Baumé ... ..	Bé	hydrogen ion concentration (negative logarithm) ... ..	pH		
benzoyl ... ..	Bz			racemic (organic chemistry) ... ..	<i>r-</i>
boiling point ... ..	b.p.	inch ... ..	in	recrystallised ... ..	recryst.
British Patent ... ..	BP	infrared ... ..	i.r.	refractive index... ..	<i>n</i>
British thermal unit ... ..	B.t.u.	inorganic ... ..	inorg.	relative humidity ... ..	r.h.
butyl (normal) ... ..	Bu <sup>n</sup>	insoluble ... ..	insol.	revolutions per minute ... ..	rev/min
butyl (iso) ... ..	Bu <sup>i</sup>			röntgen ... ..	r
butyl (tertiary) ... ..	But				
		kilocalorie ... ..	kcal	saturate(d) ... ..	sat.*
calculated ... ..	calc.	kilogram ... ..	kg	second ... ..	s
calorie ... ..	cal			secondary (organic compound) ... ..	s-
Celsius (centigrade) ... ..	C	laevorotatory ... ..	<i>laevo</i> , (-)-	soluble ... ..	sol.
centi ... ..	c	less than ... ..	<	solution ... ..	soln
compound ... ..	cpd	litre ... ..	l	specific ... ..	sp.
concentrated ... ..	conc.	logarithm (decadic) ... ..	log	specific gravity ... ..	sp. gr.
concentration ... ..	concn	logarithm (natural) ... ..	ln	square in (etc.) ... ..	in <sup>2</sup> (etc.)
configuration (carbohydrates and amino acids) ... ..	D-, L-	lumen ... ..	lm	stokes ... ..	S
constant ... ..	const.			substituted ... ..	subst.*
containing more than <i>n</i> carbon atoms... ..	containing > <i>n</i> C	maximum ... ..	max.	substitution on nitrogen, oxygen, etc. ... ..	<i>N-</i> , <i>O-</i> , etc.
		melting point ... ..	m.p.	symmetrical (organic compound) ... ..	s-
corrected ... ..	corr.	<i>meta-</i> ... ..	<i>m-</i>		
crystal, -line, -lised (adjective)... ..	cryst.	methyl ... ..	Me	temperature ... ..	temp.
cubic centimetre (etc.) ... ..	cm <sup>3</sup> (etc.)	metre ... ..	m	tertiary (organic compound) ... ..	t-
curie ... ..	Ci	microgram ... ..	µg	turns per inch ... ..	turns/in
cycle ... ..	c	micron (micrometre) ... ..	µm	Twaddell ... ..	Tw
		milli- ... ..	m		
decomposition ... ..	decomp.	millilitre... ..	ml	United States Patent ... ..	USP
degree ... ..	deg	minimum ... ..	min.	ultraviolet ... ..	u.v.
degree of polymerisation ... ..	DP	minute ... ..	min	unsaturated ... ..	unsat.*
degree of substitution ... ..	DS	molar (concentration) ... ..	M	unsubstituted ... ..	unsubst.*
density ... ..	ρ	molecular, molecule ... ..	mol.		
derivative ... ..	deriv.	molecular weight ... ..	mol. wt	viscosity... ..	η
dextrorotatory ... ..	<i>dextro</i> . (+)-	nanometre ... ..	nm	volt ... ..	V
dilute ... ..	dil.	normal (concentration) ... ..	N	volume ... ..	vol.
direct current ... ..	d.c.	normal (organic compound) ... ..	n-		
distil, -led ... ..	dist.	not greater than ... ..	≧	watt ... ..	W
		not less than ... ..	≦	wavelength ... ..	λ
electromotive force ... ..	e.m.f.	organic ... ..	org.	weight ... ..	wt
equation ... ..	eqn	<i>ortho-</i> ... ..	<i>o-</i>	yard ... ..	yd
equimolecular ... ..	equimol.	ounce ... ..	oz		

\* Only in describing general formulae in the Abstracts Section



